

U.S. Serial No. 10/671,555
Attorney Docket No. 21377

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No.: 10/671,555

Customer No.: 27182

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Confirmation No.: 4277

Inventors: Marrella et al.

Group Art Unit: 1754

Title: PROCESS STREAM
CONDENSATE RECYCLE
METHOD FOR A
STEAM REFORMER

Examiner: P. A. Wartalowicz

CERTIFICATE OF MAILING UNDER 37 CFR 1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on August 20, 2007.

Signature: Christina Mommens
Christina Mommens

**RESPONSE TO NOTIFICATION OF
NON-COMPLIANT APPEAL BRIEF (37 CFR 41.37)**

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia, 22313-1450

Sir:

In response to a Notice of Non-Compliant Appeal Brief mailed August 3, 2007, relating to the Appeal Brief filed on April 24, 2007 in the above-identified matter ("Appeal Brief"), please amend the Appeal Brief as follows:

Amendment to the Appeal Brief, Section V begins on page 2.

Remarks begin on page 4.

An Appendix begins on page 5.

Amendment to the Appeal Brief:

Delete Section V., entitled, "SUMMARY OF CLAIMED SUBJECT MATTER", appearing on pages 8 and 9 of the Appeal Brief in its entirety with a new Section V., as follows:

"V. SUMMARY OF CLAIMED SUBJECT MATTER"

The present invention, as recited in claim 1 is a method of recycling process stream condensate from a steam methane reforming system 1 illustrated in Fig. 1 and as set forth on page 7, lines 4-5, Paragraph 0019, produces an uncontaminated superheated steam stream 20 and at least one process condensate stream that ~~in the embodiment illustrated in Fig. 1 is contaminated with products of a steam reformer 16~~ which as indicated on page 7, lines 29-32 and page 8, lines 1-4, Paragraph 0021 could be a single process condensate stream 30 and could be multiple process condensate stream 36 streams as described on page 7, line 21 and 24-25, respectively, Paragraph 0020. Both of these streams are contaminated products to steam reformer 16 having been derived from water containing product stream 18 as mentioned on page 7, lines 19-20, Paragraph 0020. and as shown in Figs. 1 and 2 for the stream designated by reference numbers 30 and 36.

With reference to Fig. 2, condensate is collected from ~~a cold~~ the at least one process condensate stream 36, ~~the hot process condensate stream 30 and optionally an external process condensate stream 38, within a condensation collection drum 40 that are as~~ described on page 8, lines 5-8, Paragraph 0022. Contaminated condensate stream 44 is formed by the collection of condensate as set forth on page 8, lines 15-16, Paragraph -0022. As indicated on page 8, lines 23-26, Paragraph 0023, the contaminated condensate stream 44 is pressurized ~~by a pump 46.~~

With continued reference to Fig. 2, heat is transferred from a first part 60 of the uncontaminated superheated steam stream 20 to a pressure slightly above the pressure of the steam methane reforming process, typically between about 300 and 500 psig.

~~First part 60 of the uncontaminated superheated steam stream 20 produced in the steam production system 19 of steam methane reformer 16 is introduced into process steam superheater 56, a heat exchanger 57 and a boiler 50 to boil contaminated condensate stream 44 after having been pressurized and then passed through a condensate preheater 48 that preheats the condensate stream 44 after having been pressurized. In this regard, see page 9, lines 15-21, Paragraph 0025. As a result~~

of this heat transfer, ~~an uncontaminated condensate stream 26~~ a contaminated superheated steam stream 58 is formed as described on page 9, lines 7-14, Paragraph 0024 and the first part of the uncontaminated superheated steam stream 20 is condensed, thereby to form an uncontaminated condensate stream 26 as indicated on page 9, lines 21-24, Paragraph 24. ~~The passage of contaminated condensate stream 44 through condensate preheater 48, boiler 50 and steam superheater 56 forms a contaminated superheated steam stream 58 as described on page 9, lines 7-14, Paragraph 0024.~~

With brief reference to Fig. 4, ~~in an alternative embodiment, in place of condensate preheater 48, boiler 50 and process steam superheater 52, a process steam boiler 76 can be provided~~ is illustrated to effectuate the heat exchange to produce contaminated superheated steam stream 58 and uncontaminated condensate stream 26. ~~All of this~~ This is described on page 11, lines 8-12, Paragraph 11.

As indicated on page 9, lines 25-30, Paragraph 0026, a second part 62 of the uncontaminated superheated steam stream 20 is combined with the contaminated superheated steam stream 58 to form a combined superheated steam stream 12.

As set forth on page 9, lines 21-24, Paragraph 0025, the uncontaminated condensate stream 26 is recycled to the steam production system ~~19 of steam-methane reformer system 1~~. With reference again to Fig. 1, and as described on page 6, lines 27-30, Paragraph 0018, the combined superheated steam stream 12 is combined with a hydrocarbon containing stream 10 to form hydrocarbon and steam containing process stream 14 that is fed to the steam methane reformer 16."

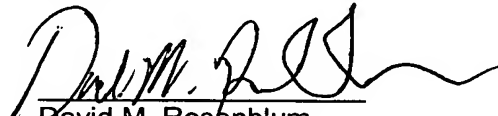
REMARKS

The Appeal Brief was indicated as being defective for failure to contain a concise explanation of the subject matter defined in each of the independent claims involved in the Appeal and in particular that the summary of the claimed subject matter includes limitations not present in the claims such as "hot process condensate" and "cold process condensate", "the contaminated condensate stream is pressurized by a pump 46 to a pressure slightly above the pressure of steam methane reforming process, typically between 300 and 500 psig". It was indicated that the summary of the claimed subject matter must illustrate the correlation between the claim limitations and support in the specification, not discuss claim limitations not claimed.

In response to this rejection, Applicants have amended the Appeal Brief, Section V. in accordance with MPEP 1205.03, by submitting a new Summary of the Claimed Subject Matter in which none of the subject matter cited by the Examiner as being objectionable is present within such summary. An Appendix is also submitted with an unmarked version of such amendment.

Applicants therefore request entry of the attached Summary of the Claimed Subject matter into the Appeal Brief. Prompt and favorable action is solicited.

Respectfully submitted,


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APPENDIX

V. SUMMARY OF CLAIMED SUBJECT MATTER

The present invention, as recited in claim 1 is a method of recycling process stream condensate from a steam methane reforming system 1 illustrated in Fig. 1 and as set forth on page 7, lines 4-5, Paragraph 0019, produces an uncontaminated superheated steam stream 20 and at least one process condensate stream that is contaminated with products of a steam reformer 16 which as indicated on page 7, lines 29-32 and page 8, lines 1-4, Paragraph 0021 could be a single process condensate stream or could be multiple process condensate streams as described on page 7, line 21 and 24-25, respectively, Paragraph 0020 and as shown in Figs. 1 and 2 for the stream designated by reference numbers 30 and 36.

With reference to Fig. 2, condensate is collected from the at least one process condensate stream as described on page 8, lines 5-8, Paragraph 0022. Contaminated condensate stream 44 is formed by the collection of condensate as set forth on page 8, lines 15-16, Paragraph 0022. As indicated on page 8, lines 23-26, Paragraph 0023, the contaminated condensate stream 44 is pressurized.

With continued reference to Fig. 2, heat is transferred from a first part 60 of the uncontaminated superheated steam stream 20 to the contaminated condensate stream 44 after having been pressurized. In this regard, see page 9, lines 15-21, Paragraph 0025. As a result of this heat transfer, a contaminated superheated steam stream 58 is formed as described on page 9, lines 7-14, Paragraph 0024 and the first part of the uncontaminated superheated steam stream 20 is condensed, thereby to form an uncontaminated condensate stream 26 as indicated on page 9, lines 21-24, Paragraph 24. With brief reference to Fig. 4, an alternative embodiment is illustrated to effectuate the heat exchange to produce contaminated superheated steam stream 58 and uncontaminated condensate stream 26. This is described on page 11, lines 8-12, Paragraph 11.

As indicated on page 9, lines 25-30, Paragraph 0026, a second part 62 of the uncontaminated superheated steam stream 20 is combined with the contaminated superheated steam stream 58 to form a combined superheated steam stream 12.

As set forth on page 9, lines 21-24, Paragraph 0025, the uncontaminated condensate stream 26 is recycled to the steam methane reformer system 1. With reference again to Fig. 1, and as described on page 6, lines 27-30, Paragraph 0018, the

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combined superheated steam stream 12 is combined with a hydrocarbon containing stream 10 to form hydrocarbon and steam containing process stream 14 that is fed to the steam methane reformer 16.